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ABSTRACT

A study examined the delivery of workplace know-how skills training to secondary-level students in Kalamazoo County, Michigan. A total of 16 teachers, administrators, and counselors from the county's schools were interviewed regarding existing mechanisms for delivering training in 23 workplace know-how skills that a group of local employers had previously identified as critical to productivity and success in the workplace. Basic academic skills and task achievement competencies were integral parts of each school curriculum studied. Personal characteristics were being taught primarily through modeling and one-on-one interaction with students. Initially, most respondents indicated that behaviors with respect to organizations and interpersonal skills were not being directly addressed; however, closer questioning revealed that such skills are being addressed in relation to the education environment. The biggest identified barrier to delivery of workplace know-how skills training was said to be public perception that teaching and learning are not conducive to integrated, hands-on approaches to education and fear that movement toward practical applications will result in a "loss of basics." There is a need for a "teaching work force" and educators with "real-life" experience to model to students. (Appended are the following: interviewer protocol procedure for identifying interviewees; survey instrument; lists of Education for Employment Assessment Workgroup and Education for Employment Outcomes Task Force members and study participants; and glossary.) (MN)

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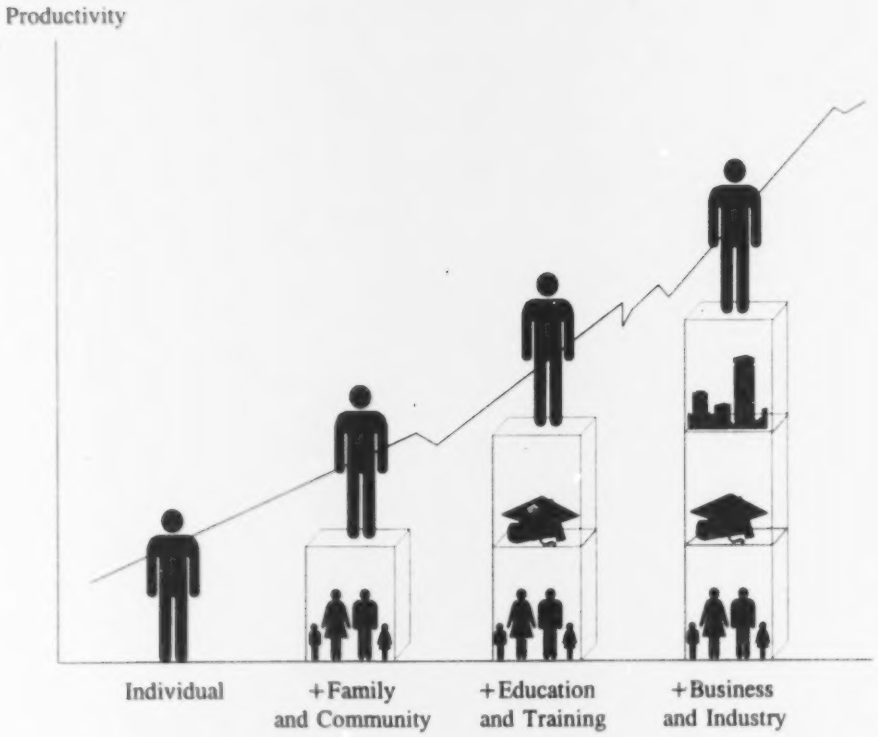
Delivery of Workplace Know-How Skills To Secondary Education Students In Kalamazoo County

An Inventory



by
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for
Kalamazoo County Education for Employment Council
Outcomes Task Force

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Executive Summary

The mission of the Education for Employment Outcomes Task Force is to **identify, communicate and implement strategies to address the delivery of "workplace know-how skills" expected by the employers of the local labor market.** The first step taken by the task force was an assessment of the local labor market to define clearly the skills needed to be productive in the workplace. This study culminated in the release of The Workplace Know-How Skills Needed to be Productive: Technical Report by Kevin Hollenbeck of the W.E. Upjohn Institute for Employment Research in May 1994. This report outlined the "23 most important workplace know-how skills" as identified by employers.

We now turn to the education community to understand how they address these "workplace know-how skills". These skills include basic academic skills, personal characteristics, task achievement competencies, behaviors with respect to the organization, and interpersonal skills. The scope of this report is an overview of initiatives offered by secondary schools in Kalamazoo County. It is an inventory, not an evaluation, of their curricula.

This study is intended to be a broad "brush-stroke" approach to understanding how education addresses the needs of the workplace. Future studies should draw from the teachers themselves, who must implement the skills, from present and former students, teacher educators, and from "second-chance" training providers.

In personal interviews with the author, the educators described increased incorporation of hands-on application of skills within complex processes, citing that learning is more productive in context than in isolation. They also identified barriers that hinder education's efforts to implement "workplace know-how skills". The most striking barrier is that public perception of "teaching" and "learning" is not conducive to integrated, hands-on approaches to education. Efforts to move toward more practical applications are met with resistance from a public that fears a "loss of basics".

Finally, it is worthy of note that we found educators who are ready and willing to dialogue with business as to how best to collaborate toward a more effective work force. There is need for a "teaching work force" and educators with "real-life" experience to model to students.

About the Author

Working with the assistance of the Kalamazoo County Education for Employment Outcomes Task Force Education Assessment Workgroup, **Malinda J. Frybarger** had primary responsibility for the inventory design, data collection, and synthesis of the study. Ms. Frybarger would like to acknowledge Mr. Lawrence Schlack and Mr. George Erickcek, Education Assessment Workgroup members, who also assisted with the data collection.

Ms. Frybarger worked under the supervision of Mr. Craig Schreuder, of the W.E. Upjohn Institute, whose input on design of the study and synthesis of the data was invaluable. Ms. Frybarger's affiliation with the W.E. Upjohn Institute was as an intern, while completing her master's degree in reading from Western Michigan University. Ms. Frybarger specializes in workplace literacy and adult education.

Citing the project as an enriching experience, both personally and professionally, Ms. Frybarger states, "It has been a privilege to be a partner in building the bridges of communication between business and education, in order to foster a more highly skilled work force for our community."

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Introduction

The Workplace Know-How Skills Needed to Be Productive: Technical Report, by Kevin Hollenbeck was a compendium and synthesis of focus groups held to delineate the skills needed by employers in the Kalamazoo area labor market. The "skills needed to be productive" varied according to the particular thrust of each participant. Through a process of prioritization and voting, consensus was reached in each group. Data analysis from these focus groups led to the identification of 23 "most important workplace know-how skills" which are outlined in the report.

These "23 most important skills" became the basis of this education inventory. The goal of this study was to gain an understanding of which workplace know-how skills are being addressed with all students; barriers that hinder efforts to implement workplace know-how skills; philosophies of educators toward "workplace know-how skills"; and areas where dialogue can be established between education and business to enhance the quality of our work force. The education inventory has begun with a "broad picture" look at Kalamazoo County secondary school efforts to address "workplace know-how skills".

The information in this report was gathered through a series of 12 personal interviews (see Appendix II: Survey Instrument) with one or more persons delegated by the superintendent of the district (or principal of the school) as most knowledgeable regarding their school (district)'s efforts to address "workplace know-how skills". Interviews were conducted at the education provider sites from October to November 1994. Participants included high school principals, guidance counselors, school improvement committee members, curriculum coordinators, vocational education directors, and a superintendent, from nine public school districts and two non-public high schools. (See Appendix V for a complete list of participants).

The instrument used in each of the 12 interviews addressed the "23 most important skills" outlined in the labor market study. The interview sessions were taped (with permission of the interviewees) and notes enhanced with the transcription of the tapes. An outline of our procedure for this education inventory is attached as Appendix I.

Report Organization and Format

This report is organized by the responses to questions on specific skills or characteristics. Specific skills were addressed in the following categories:

- Basic Academic Skills
- Personal Characteristics
- Task Achievement Competencies
- Behaviors with Respect to the Organization
- Interpersonal Skills

For each skill, participants responded to three basic questions: where in the curriculum the skill is addressed, how it is related to the students as transferrable to other applications, including the world of work, and how the skill is assessed. The paragraphs introducing each of the categories and each of the specific skills are a synthesis of the responses. Actual responses follow (with some editing to allow combining of similar answers). Those responses that seem to represent most closely the specific skills referenced in the labor market survey[1] are in **boldface type** for emphasis.

The responses are not to be construed as the opinion of any one school district, the W.E. Upjohn Institute for Employment Research, or the author. However, as an aggregate, they do paint a picture of how education is responding to the needs of the workplace.

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[1] Hollenbeck, Kevin. The Workplace Know-How Skills Needed to Be Productive: Technical Report for Kalamazoo County Education for Employment Outcomes Task Force, May 1994.

Basic Academic Skills

Basic academic skill offerings vary since a large number of students come into the high school already possessing "basic academic skills". Rather than certifying that specific skills are directly addressed with all students, some districts preferred the following phraseology. "The school either provides, or takes responsibility for ensuring that a student has basic academic skills by the time he or she completes high school."

Basic Reading

Basic reading is addressed across the curriculum in all districts/schools interviewed. Responses of interviewees which define a philosophical base where and/or how reading is addressed by the curricula, practices, and resources include:

- **Students have to read, comprehend, and relate information to others.**
- **Reading is a prerequisite for successful performance in all areas.**
- Consciously addressed in middle school, less overt instruction at the high school level.
- Ensures provision of instruction if needed.
- Taught and evaluated in almost every class, especially literature, but even in math.
- Special developmental reading classes where needed (generally for students who do not qualify for special education, yet perform at reading levels below that needed for core academic classes).
- Address students' reading needs at a level which is developmentally appropriate to their skills.
- K-12 reading specialist in district, working with secondary school students as needed.
- Dealt with in a cluster along with writing, speaking, listening, and use of technology in communication.
- Basic skills enhancement hour for all students, individualized to meet immediate needs.
- Professional journal articles read and summarized in technical education program.
- Functional context reading and following directions in technology classes.

Conveying to the students the applicability/transferability of their reading instruction was expressed in the following ways:

- There are no jobs that do not require reading. Everyone at some point will go for advanced training.
- **The need for these skills is formulated in the home from a very early age and reinforced in the school setting. We reaffirm and point out that good comprehension skills are applicable to their academic and life goals. It is a necessary part of being a productive citizen.**

- Though not necessary to explain that reading is important, it is imperative to convey the amount of reading necessary in future endeavors and to establish a comfort level with reading.
- In the automotive repair industry, technology is constantly changing, and you must constantly reference manuals in order to perform successfully on the job.

Reading assessment is primarily described as formal, sometimes standardized, and "pencil-paper-test". However in many of the districts, trends are moving toward more authentic and informal assessment, such as the following:

- Hands-on assessment might consist of giving a set of parameters requiring reading and calculations to solve a problem.
- Rubrics (pre-established criteria for assessment of mastery).
- Informal assessment through oral questioning.
- Multi-faceted demonstrations of proficiency.
- Self-assessment via portfolio work.

Basic Verbal, Speaking

The ability to articulate knowledge clearly is addressed across the curricula in all the schools/districts interviewed. Examples of implementation include:

- **Responding to questions and presenting ideas.**
- **One to two minute weekly oral reports (summarizing) professional journal articles.**
- **Oral presentations required in core academic classes as well as education for employment classes.**
- **Explaining conclusions to peers.**
- Oral presentations of increasing complexity.
- Fifteen experiences in public speaking mandatory in speech class (required for graduation). Speeches range from short introduction to newscasts, to pantomime, to demonstration of ability with a comprehensive six-to-eight minute presentation on a topic.
- Formal instruction in speech, drama, as well as debate and forensics.
- Team coaching of oral presentations by Language Arts and content-area teachers.

When asked how they convey to the students the applicability of this skill for the future, the responses included:

- **Students are told they need to be able to express their ideas to their peers in order to be able to function as a team.**
- **Provide real life opportunities to try out their skills on others, both inside and outside of the classroom.**
- Give examples of when and how they will use their oral communication skills.

- Verbal interaction is important in all walks of life
- Reaffirm and point out that these skills are applicable to their personal goals.
- Much of the "conveying of transferability" is "teacher unique".

Assessment of verbal communication and speaking is primarily informal and via direct observation, looking for clarity of expression and the student's comfort level with his or her presentation. This inventory found that some schools are beginning:

- to evolve toward more authentic assessment that involves "real life" application of skills.
- to develop rubrics that set the criteria for success.
- to provide a more holistic assessment of the students' abilities.
- to use self, peer, mentor, and expert evaluations.
- to use a step-by-step formative evaluation rather than a summative evaluation.

Basic Writing

Written communication is also addressed across the curricula of all schools interviewed. Examples of how and where the skill is addressed include:

- **Orders for materials, estimates of time and dollars.**
- **Teaching of technical writing, though currently seldom done, is necessary to perform well in the work world.**
- **Synopses of journal reading in technology classes.**
- **Directly address note-taking, summarizing, spelling, grammar, punctuation, and penmanship, as well as content.**
- **Word processing is involved in the writing process.**
- **Report writing required of all students.**
- Resume writing, **memos.**
- All staff help the students develop their portfolios of accomplishments, which exemplify basic skills.
- Essays, short themes, major research papers, short interpretive papers, and creative writing.
- Writing is primarily addressed in the English curriculum although other content areas are beginning to emphasize format as well as subject.
- Finished written products required each nine-week marking period.
- Development and modeling of the entire writing process taught across the curriculum.
- Some partnering between Language Arts and content-area teachers, where the Language Arts teacher addresses the research, investigation, and format, while the content-area teacher addresses the subject matter.
- Basic skills enhancement hour for all students, individualized to meet immediate needs.

Students always want to know "why". Adults and young people alike learn better when they understand and take ownership in the purpose of their learning. Interviewees offered the following comments regarding how to show students that they "will need this again":

- **Hands-on application of "job-like" tasks in business and technical education classes.**
- **Working more and more with real life experiences, so that it is more easily seen as 'applicable'.**
- **The application of skills is becoming more important. How does this fit into the world today? How do I apply it? Emphasis on application rather than echoing back.**
- **Explain to them that this is part of a real job. Paint for them a vision of how their work here in school has real impact on the quality of their future work life.**
- Continue to reaffirm the expectations set at a very early age.
- Integration into all subject areas.
- Basic skills enhancement hour for all students, individualized to meet immediate needs.

Evaluation of writing skills comes in a variety of formats, from individual consultation to standardized testing. Comments regarding evaluation were:

- **The portfolio of accomplishments has the potential to be used as an assessment tool.**
- The majority of the teachers give a separate grade for writing quality, in addition to content.
- Use focus corrections. That is, we look at several specific aspects for evaluating a particular exercise, rather than evaluate all skills on all assignments.
- Developing rubrics and final exam assessments to measure student performance.
- Standard grading system which looks at performance in a summary fashion.
- Much assessment is still paper-pencil-test.
- Self-assessment via portfolio work.
- Develop rubrics to encourage a holistic view of student performance.
- MEAP and other standardized testing.
- Look at it. Is it legible? Is it understandable? Does it get to the point?

Listening

Listening skills are most often addressed indirectly throughout the curriculum. The study found some direct instruction in business technology classes. Comments regarding where and how "listening" is addressed in the curriculum included:

- **In technology classes, listen to the needs of customers, symptoms of problems, specifications for projects.**
- **Goal is to help students be able to assimilate information, but do so in a controlled way, with proper conduct, self-control, with the ability to attend to conversations, and follow directions.**
- **Interviewing techniques instruction and practice.**
- Lecture approach encourages students to listen attentively, take notes, make decisions about what is being said.
- Informally focus on this by encouraging students to get accurate information, and interactive class discussion.
- Use a tape on good listener vs. bad listener.
- In the business class, students practice taking four telephone messages.
- Some instructions are given only orally to force listening.

Helping students to see the applicability of "listening skills" was expressed in the following ways:

- **In technical classes, they work on real jobs with real customers and must listen to their needs and wants in order to produce a product that is satisfactory to the customer.**
- **People are taught to communicate face to face, to be aware of how their appearance is part of communication.**
- Informally talking about conveying information accurately brings up the need for attentive listening.

Most evaluation of listening skills appeared to be indirect, in that performance on assignments and tests is a reflection of **attentive listening.** Direct classroom observation of attentive listening is also a part of the evaluation process. Comments on evaluation of "listening skills" included:

- Evaluate degrees of successful listening with feedback during discussion and formal testing.
- Written tests for technical, as well as academic classes.
- Ask for a (feedback) response to verify level of understanding.
- Formal evaluation of listening, tested in isolation.
- Students listen to each other in foreign language classes.

Basic Math

Many interviewees alluded to the concern that we have reserved the practical application of mathematics for those who have already mastered abstract concepts and for those whose are not developmentally capable of the more abstract. The mainstream of students pursue algebra, geometry, etc., yet may miss more functional math. The trend is now moving toward more practical application of math skills for all students. Comments about the implementation of basic math skills in the curricula included:

- **Technical classes use measurements and make estimates.**
- **Technical classes do setup and layout of projects involving calculations and estimates.**
- **Math is addressed not only in the math department, but also in science, technology, and technical classes.**
- Math is required for graduation.
- New class called "consumer math" emphasizes practical applications, hands-on practice of skills needed for survival.
- Most students come in with basic math skills. Those who still lack basic skills take special classes that focus on math in an applied fashion.
- Basic transition math is taught at the freshman (and 8th grade) levels.
- Goal is to have every student succeed at "C" or above in the basics of algebra and geometry. Need to develop stronger alternatives to traditional math course offerings that emphasize practical application.

The consensus on the school (district)'s efforts to convey the idea of transferability seems to be that reality lies on a continuum between practitioners who still adhere to "worksheets and exercises" and **those who require application of skills in complex practical applications. The practical applications have the advantage of making the purpose more obvious and the learning longer lasting.** Comments regarding how math is related to the students as necessary for future endeavors included:

- **Which is more practical - order lots and lots of materials so you won't run out, or estimate and order exactly what you need?**
- Hands-on demonstration and practice makes the transferability obvious.

Evaluation of basic math skills, though still primarily in "pencil-paper-test" mode, is **evolving toward more holistic performance-based assessment.** Comments regarding how they assess math skills were:

- **Building trades and mechanics classes apply basic skills and are assessed "on the job".**
- **Informal assessment (on-the-job performance)** and formal assessment (MEAP).
- **Systems model of assessment - input, process, output, feedback, with feedback as the assessment loop.**
- **Team assessment of itself and other teams.**
- Written tests for technical as well as academic classes.

Personal Characteristics

The personal characteristics are often taught primarily through modeling and one-on-one interaction with students. Personal characteristics are addressed directly as appropriate. In some schools though, direct instruction time is both planned and spontaneous when the "teachable moment" occurs. Respondents suggested that instilling these personal characteristics ranges from "easy to reaffirm" to "very difficult" depending on the degree of reinforcement in the student's environment, primarily the home.

Honesty, Integrity

Most of the comments regarding honesty centered around accountability for doing one's own work and avoiding plagiarism. There were several schools, however, that emphasized fostering development of the whole person, with personal honesty and integrity being paramount.
Comments regarding honesty and integrity included:

- **Honesty is addressed in how we approach students; it is part of our expectations across the board.**
- **Students sign a contract about living up to the mission of the school and understand that they represent the school both inside, and perhaps especially, outside the school.**
- The English curriculum requires honesty in proper documentation of work.
- The definition of "cheating" has had to be modified to encourage teamwork where appropriate.
- Directly addressed in Bible and religion classes in non-public schools.
- Consistently enforce consequences for indiscretion in this area.
- Honesty is part of the honor code.
- Highly emphasized in law enforcement classes.
- Modeled by how we treat each other, and we have no locks on our lockers.
- Emphasized in all areas of the high school. Honesty is included in our point system for discipline problems.
- School code of conduct identifies misbehavior. Norms that we live by in terms of discipline are fairly well defined.
- This is a part of who we are, to ensure that our students are honest.
- Modeled and addressed directly, an integral part of the entire curriculum, but especially addressed in the religion curriculum (non-public school).
- Do a pretty good job of performing to the level that our parent community wants. They want us to teach obedience. Other personal characteristics are values that parents prefer to teach at home.

Conveying concepts of honesty and personal integrity as important and transferrable when the students are no longer in high school is, as above, often a matter of the way students are approached and treated. It is often a matter of modeling by school personnel. This is not to say that how these characteristics affect their college or work life is not addressed. It is, however, important to realize that students learn what they "live". The most important way we can teach students to be honest and emphasize personal integrity is by "practicing what we preach". Comments regarding how to relate to students the future applicability of honesty were as follows:

- **"For the rest of your life, how do you want to be treated by others?"**
- **The confidentiality issue in the health education for employment classes is a real revelation to some students and an opportunity for us to show them the importance of integrity in the workplace and the consequences of indiscretion.**
- Teach them to take pride in themselves and in their organization, in that their personal actions impact the whole.
- "Do you want to be part of the group that says 'be honest'? Then you need to walk the talk."

The assessment of honesty and integrity is an informal, yet integral part of developing the whole person. A few comments were made regarding assessment.

- The new MEAP will incorporate life skills.
- Discuss and monitor plagiarism.
- Only assessed in a negative sense. If you are not honest, there are consequences.

Responsible, Reliable

All schools expressed that this characteristic is addressed across the board. It is part of codes of conduct, classroom rules and expectations, and necessary for successful performance academically. How this is addressed in each class is, of course, "teacher unique". The following comments were offered about addressing responsibility and reliability:

- **Expect them to be responsible for their own actions.**
- **Ask students to come prepared, to have work in on time, be there on time, get material as it is presented.**
- **In group work, students rely on each other to do his/her part.**
- **Taught in teamwork, cooperative learning situations.**
- School policy is that no extra- credit will be given unless all work was completed and turned in **on time**.
- Encourage student involvement in extra- and co-curricular activities, because these have such tremendous potential for teaching the young people to be responsible.
- Teach by **doing** what we say, modeling the ethic.
- Most consistent on this skill above all others, yet we fight some real battles.
- In a discipline situation, we simply ask them to explain what <u>they</u> did, did it solve the problem, etc. rather than allowing emphasis to be placed on someone else's actions.

Being responsible and reliable, is of course paramount to being productive in post-secondary education, and ultimately in the workplace. The following comments were offered regarding how they attempt to relate this to the students:

- **Competitors will take their business and they won't have work to do if they do not meet deadlines.**
- **"Do your job, come prepared. Good students do these things ..." Often make the analogy to the work world.**
- **Clearly communicate the expectation that in real life, including right now, they are expected to do the job well, and on time.**

Assessment of responsibility is done on a daily basis, as students are held accountable for completion of assigned tasks. The following comments were offered regarding "assessing responsibility":

- **Results can be seen in the end product.**
- **Assessment on responsibility fosters a learning by doing, learning by their mistakes.**
- Students are held accountable for their own actions.
- Tough on kids who don't do homework (A zero plus two As is still considered failing).

Lifelong Learner, Willingness to Learn

The study found that this is a recent addition to some school improvement plans. This indicates a more concerted effort to instill a desire for learning and the skills needed to learn new concepts independently. The following remarks were made regarding how they address this characteristic:

- **Provide the skills on how to access information, how to organize it, how to time manage, goal set. And we model and encourage enthusiasm for learning.**
- Directly addressed in middle school. In high school there is a four-year plan for career development. This is worked on in English and social studies. This is to help the students take active part in planning their academic careers and to see how their classes dovetail with their goals.
- Not as systematic as we could be, yet our kids are productive and are sought after by the business community.

Relating the applicability of being a lifelong learner is a challenge with a target audience that cannot see very far into the future. Most high school students have a finite view of what their futures may hold. They often do not envision how learning will continue throughout their lives. Planting the seeds of enthusiasm and curiosity are indeed challenging. The educators interviewed offered the following:

- **You will change jobs five to eight times in your life. You will be asked to learn new skills. You must be flexible and know how to learn.**
- **We talk about ongoing education, retraining, the average age at KVCC.** (Showing the need to continue the learning process later in life).
- We encourage the use of the "teachable moment". When I think of how we help them see connections, "current events" comes to mind. I don't mean this in a social studies context. We use current events to correlate to our own value structures. We talk about how students might need to fit into situations.
- One thing we do is explain "What you get is what you put into it."
- Being a lifelong learner encompasses a willingness to take active part in the larger world. We try to foster a service mentality. We have an intense service component in the curriculum which helps the students to taste and sample how they may play a role in the larger world beyond high school.

Assessing a student as a lifelong learner is a nebulous task. When enthusiasm is there, you recognize it immediately, and you know it will last. Evaluation based on willingness to learn for those who lack motivation, and of our own efforts to encourage are more difficult. The following comment was offered:

- This assessment is informal and of a personal nature between student and teacher or student and administrator.

Initiative, Self-Starter, Motivation

The overall impression of attempts to teach initiative, etc. is that it is done in stages. Students are provided more guidance as freshmen. Each succeeding year they are weaned toward more independence as learners. Being a self-starter involves some of the other characteristics heretofore mentioned, such as reliability and willingness to learn. The following remarks were offered regarding how this characteristic is addressed in the curricula and teaching process:

- **We reward initiative in terms of our response, praise, comments shared with parents and with the students.**
- This is taught in a variety of classes. We stress this in everything in the curriculum, from academic to extracurricular.
- We make a conscious effort to work on motivation. Lack of motivation has its own consequences.
- Addressed via classroom expectations, rules, and regulations.
- Teacher-driven, modeled.

Teaching the applicability of motivation has a lot to do with creating a new mindset for students. It has to do with positive reinforcement of initiative, and talking about how this breeds success in life. Reflections on transferring the characteristic included:

- **I expect adult conduct. By treating students as co-workers and colleagues, you make the transfer to the real world less of a giant leap.**
- **Address students as if they were on the job: "Look, you're on the job, and I'm not paying you to sit here and fool around."**

Informal assessment of initiative certainly happens on a regular basis, through conversations with students, comments on progress, etc. The end results of projects will reflect the level of initiative. This is often part of the grading process. Additionally, educators offered the following:

- **Parental expectations are the key to motivation. This motivation is not necessarily related to IQ.**
- Assessment is probably the hardest part. What do you do with the unmotivated kid?
- This is only assessed in the negative. If you are not motivated, you fail.

Task Achievement Competencies

Task achievement competencies are an integral part of each school curriculum. They are addressed with an integrated approach, not as separate units unto themselves. The consensus was that these competencies must not be taught in isolation, but rather as part of the learning process.

Attendance and Punctuality

Educators preferred to address these two competencies together, stating that they really do revolve around the same issues and attitudes. The following remarks were made regarding how schools address attendance and punctuality:

- **"We want you in school. Your first job is that of doing a good job as a student."**
- **School policy is more than 10 absences, they lose credit. Three tardies equals one absence.**
- Attendance and punctuality are worked on consistently. Records show that success is lower in high school than in middle school. This is not due to lack of effort on the part of the school, but is part of the rite of passage - "wheels". When they drive, they are more tardy, and more frequently absent.
- Parental backing makes this easy. We have no attendance problems.
- Stress the importance of being there every day, so students don't get behind. There are consequences for not attending, i.e. reduction in grades, loss of credit.
- Most important is to make it worth their while to be here.
- Good attendance is well understood; we average 98%, with many 100%'s.
- This is part of the code of conduct. The competency begins at home. **If this is not valued in the home, it is very difficult to teach.**
- Issue is also addressed in extra- or intra-curricular activities.
- Clearly defined expectations and consistent enforcement.
- Attendance and punctuality are stressed from the very earliest years of grade school. As a result, our attendance rate is in the high 90s, but not without a lot of blood, sweat, and tears.
- Regarding parental decisions to approve missing school, we do not argue with that. However the students are still accountable for the learning, and we cannot replicate the loss of the experience the student would have had in school.

Analogies to the world of work, and to future years of schooling seem to be the most common means of relating the applicability of attendance and punctuality. The following examples were shared:

- **Employers expect you to be here each day, ready to do your job.**
- Teachers sometimes say: "You won't get away with poor attendance in the work world."

The study revealed that assessment of attendance and punctuality comes about by applying negative reinforcement of poor performance, but also through assessment of products produced (it reflects in the quality) and informally through one-on-one conversations. These competencies are addressed and monitored across the curriculum in each of the schools interviewed.

Flexibility

Being able to adapt to new situations is a difficult competency to teach in a world that tries so hard to accommodate our every need. We live in an instantaneous, "microwave" society. Students expect to be accommodated. Our efforts to foster flexibility, though not crushed, do fly in the face of this pervasive attitude. The following comments were offered when asked how they address flexibility in the curriculum:

- **In cooperative learning groups, students are taught to backup, reassess, restructure.**
- In writing instruction, students are asked to consider other options, to answer to the implied query "where did you ground this?"
- In math and science, the flexibility may come in how you arrive at the correct answer.
- In social studies, we do a lot of conceptualizing, generalizing, looking at what other ways they can see to accomplish the same result.
- One of the most difficult things in the modern era of education is flexibility. **Students are at a disadvantage because this is becoming a push button world where everything is automatic.**
- Modeling is so important here.
- Treat students as individuals in a respectful manner. Use common courtesy and basic reasoning to encourage flexibility. The response is generally better with such a courteous approach.
- "You can only teach what you are willing to do. The support system has to be there. Modeling is a must."

It is important to help students see the advantages of being flexible, that is, to foster a sense of how the flow of work and cooperation is enhanced by a willingness to adapt. The following observation was made:

- **Try to show students that working in teams is "greywork", not black and white work. Compromise and adaptability make things more productive.**

Much like being willing to learn, being flexible is assessed primarily in an informal way, through direct observation in the classroom, in cooperative learning situations, and through one-on-one conversations with students.

Problem Solving

The following "evolution" was offered by one of the interviewees as an historical perspective as to how education has and does approach problem solving. The other interviews lent credence to using this history to understand the continuum of how problem solving is addressed.

Education has gone through an evolution regarding problem solving. First, only the gifted education students dealt with problem solving, but even then it was a very stylized, "calisthenics" approach. Then we realized that problem solving was needed by all. Activities for problem solving were incorporated into the curriculum, but still as isolated skills. Now, as we move into a more holistic approach, we are creating more real problems with performance opportunities. We put students into situations where they have real problems to solve. This must, of course, be viewed as a continuum. There are teachers at both ends of the continuum and many in between.

Research-in-learning theory shows that the most significant learning is connected to real situations. Newly trained teachers are finally coming to us with this mode of thinking. We are starting to reap the benefits of what we have learned. The following responses were made to where and how problem solving is addressed in the curriculum:

- **What is the question? What information do you have? How do you put together your resources to resolve the problem or question? Stepping through this process is done on a daily basis.**
- **Goal is to build into the curriculum a quest mentality. "If I can't find the answer, I will look it up." It is a research-based way of looking at life. Instead of trying only one or two solutions, try six or eight, then try another person who may have six or eight solutions.**
- **Create a "learning community" which highlights the critical difference between isolated, segmented learning and integrated learning where the lines between theory and application begin to disappear. The goal is not to arrive at the same answer, but to solve the problem.**
- **Marketing and technology classes work in teams to resolve problems, create solutions to match needs.**
- Addressed in science, math, social studies, and language arts.
- If there is a weakness in the program, this is it. Some of our teachers do **foster this by stepping through the logic process and encouraging thinking.**
- Applied in technical classes.
- Less obvious in English and social studies, but it is there.
- Goal setting in 9th grade civics class.
- Dealt with in assignment situations. An example is the management-support component to the business technology class. "Management support" is very hands-on at first and gradually withdrawn. At the end, they must examine a problem and determine a solution, including choosing computer applications to serve the needs.
- Addressed in math, science, and technical classes.
- Addressed in cooperative learning situations.

The method of instructional delivery is key to helping students see the transfer of problem-solving competency to the world of work. If you simply tell them it transfers, then your words are soon forgotten. If they experience it for themselves, the learning is theirs to keep. The following observations were made regarding the transfer of problem-solving skills from school to other applications:

- **Provide open problem solving, using all resources, and the end result is unknown, even to the instructor, as opposed to a closed problem-solving situation where everyone knows the result, and just determines how to get there.**
- **Provide real life situations where students must decide how to accomplish tasks with the resources they have.**
- **Foster problem solving, open up minds, encourage students to think about alternatives.**
- **Consistently require students to problem solve in groups.**
- Not much is done with this in the core academic classes. There isn't much transfer to the real world; especially English and social studies. This is due to the passion of the teachers for their "subject". I don't believe teachers keep the concept of transferring their learning in front of the students on a daily basis.
- Provide experiences in problem solving so the skills remain intact.
- This sometimes involves a high level of decision making and responsibility for students, helping them to make responsible decisions and choices.
- Students often have skewed expectations regarding college and life after high school. We help them to come to grips with real life, what their resources and academic performance will allow, and help them to realize that there are solutions that will help them be a success in life. We try to help them get beyond their pipe dreams and deal with the reality of solving the problem.

Assessment of the capacity to problem solve is often done by observation, and also by looking at end results. The following comments were offered:

- **One example is a technical program, where the leaders of teams meet every week (roles rotate each week also). The team leader gets the objective, and his goal as team leader is to lead his team to solve the problem.**
- **After the problem is solved, have the students describe the process they went through, or be an observer to a problem-solving session and describe what they see.**
- Observations by the teacher, peer evaluations, cooperative learning.
- Most teachers are rotating roles so they can see kids in a variety of roles.
- We tend to tell kids what to do, so I think we are weak on this, yet they consistently score well on ACT science reasoning.

Common Sense

Common sense seemed to be an elusive term for most. While it is a 'common' term, it does evade a strict definition. Some defined it as reflecting, analyzing, and taking considered action. Others saw it as logical thinking, as is easily seen in math and science. The experience of trial and error, often lacked by students of high school age, fosters common sense. In this way, schools can "teach" or encourage common sense by allowing forays to find out what works and what doesn't, and learning from mistakes, as opposed to always giving complete directions. How to address common sense was expressed as:

- **Common sense is a learned type of procedure. You do something, and you get something in return. Draw a correlation between an action and a response. Help them to learn when they have acted inappropriately. Talk about how to correct for next time. Walk through the scenario again, with calm thinking. Many times this will help students to act responsibly and cope with passions and emotions.**
- **Because common sense is part of your makeup, sometimes you act without looking like you think about it, so it looks like "common sense". Common sense really does encompass reflection and analyzing, and students need to be guided through this process.**
- In science and math, teach students to think logically, defend their position to others, step-by-step analysis.
- Encourage risk taking.
- Ask students to explain the why and analyze the results of their actions.
- Go through a logical thinking process with them. Did you learn anything? Did it solve any of your problems? Was it worth it?
- Play "what if" to help students analyze situations.
- Have some yourself!

Educators felt that the constant effort at helping students to take time to reflect, analyze, and take considered action are in itself **testimony that this is a necessary life skill.** No comments were made regarding direct efforts to show students how this may apply later on or about direct assessment of common sense.

Time Management

Five of the 11 schools (or school districts) mentioned specific curriculum areas where direct instruction on time management takes place, though all address the competency in some way. Several mentioned that direct emphasis more commonly takes place in middle school. Two schools mentioned that they are feeling a need to do something more formal regarding time management to remediate what was not absorbed adequately during middle school. Comments on how and where time management is addressed were:

- **The teaching strategy for time management is more in the environment you create. We are trying to get away from segmented passive thinking that produces only minimal skills. We try to provide both short- and long-term planning**

experiences, coordination of tasks, resource acquisition and utilization, product development, and product assessment. Only when you go through all these steps can you learn whether you have used your time effectively or not.

- **Deadlines are set for technical class project completion. Students must participate in setting work schedules to meet deadlines/goals.**
- Coach them through the steps, providing the incremental skills needed to effectively manage time. This is difficult for teachers who are "recipe" bound and don't see the broad picture that the student has to deal with.
- Built in across the curriculum.
- Addressed in freshman orientation.
- Informally addressed in all classes.
- We talk about planning and managing time.
- We require a study hall for all.
- Each class period has both instruction and work time.
- We place limits and expectations and there is pressure to complete the work within a specified amount of time.
- We use movies on time management in business technology class.
- Addressed in the study skills unit in 9th grade.
- This is informally addressed. We consider our teachers to be advisors and our students advisees. Kids are very eager and willing to ask for help.
- Like critical thinking, this is an esoteric skill that we could do a better job with.
- Informal, modeling, keep a calendar of due dates.

Regarding the transfer of time management ability, one school commented that "mostly we talk about how this will affect them in school, next year, or college, but there is little mention of the world of work". This relates to the observation that students of high school age have a very narrow vision of their future. Relating the skill to their next step may be more meaningful than a concept that is less clear to them, such as the world of work.

Time management is assessed in the sense that the end result displays a clear picture of how effectively the student has used his or her time. Like initiative, it becomes part of the aggregate grade. One school shared that in the technical classes, jobs are estimated to take a certain amount of time. Students are graded up for finishing early, and down for taking longer, with quality of work always considered foremost.

Consistently Accurate, Quality Concept

Answers to this query varied from emphatic "yes, we always *expect* their best" to "no, not as long as we continue to pass students who do C and D work". Even those who felt that passing students with Cs and Ds signifies that they do not address the concept, indicate monitoring of quality via grades. They indicated progress toward insisting on "mastery level" (80% or better) in order to advance to the next level. This concept is evolving in most of the schools, but is more advanced in some than others. Additional comments on addressing accuracy and attention to quality included:

- **Quality concept/consistent accuracy is expected across the board; however, our internal standards may not transfer to the outside world. This is one of the areas where business and industry have not put out a clear picture, for society in general, even for their workers, that says, here are our standards. Therefore, I am not sure that teachers in general are enough aware of specifics - what kinds of standards are out there. Quality has not been defined in terms of criteria.**
- All work is *expected* to be their very best work, on time, appropriate to the task, appropriate format, background material and research.
- Products *should* be the student's best effort.
- Expectations in all classes are clear. Work must be complete, neat, and on time.
- Encourage their best and not accept less than their best. There is some real danger, however, in determining at what level a student can perform.
- Best teachers encourage quality, insist on redo until correct (or more correct). We give a lot of incompletes.
- In technical education, minimum standards are set that students must meet to move on.
- We are evolving toward mastery-level expectations in academic classes as well.
- In technical classes, do it right or do it over.
- In business technology classes, grades of C or less mandate a redo. If students receive a B, they are encouraged to redo, and show how they can easily produce a more excellent product. If they are normally an A student, and receive a lower grade, then we discuss the details and analyze the situation together.
- One problem we do battle with this emphasis is the chasing of the high GPA in a college prep school. I don't know if students always understand the correlation between the quality of their work and the high grade. I think a lot of it has to do with working on personal integrity. We try to keep them from losing sight of being a good person.
- This is a struggle. The problem goes back to the content-area teachers' lack of concern for format.
- The "worksheet" mentality also interferes here. Skills taught in isolation do not produce quality products when applied to a complex problem.

Comments about helping students see the transfer of the skill indicate that increased quality is expected as you advance to each level in school/college. It was also mentioned that extra- and intra-curricular activities hit hard on the concept. There is less chance to do mediocre work in this setting. Respondents also remarked:

- **It seems that only recently has American business been vocal about quality. I'm not sure there's enough information or experience for teachers to be able to convey this to students.**
- **The concept of quality, as defined by business, is not modeled for us in general, so I don't think we are able to accurately convey *business's idea* of quality to the students.**

Regarding assessment of quality, the following comments were made:

- **Beginning to experiment with rubrics to evaluate both quality/accuracy and content**.
- Teachers spend a considerable amount of time setting expectations. Consequences are clear if expectations are not adhered to.
- Monitor quality via grades. Remember that a grade is a culmination of so many issues and many of the above characteristics and skills come into play.

Behaviors with Respect to the Organization

Behaviors with respect to the organization were the skills that educators at first glance thought of as "not addressed" by the school. Although students are not part of a business, per se, they still are in a position where others are impacted by the quality of their work. An understanding of their role in various learning environments and an awareness of how they impact others are addressed by schools. Seeing their place in the larger scheme seems very applicable to the behaviors described by employers.

Students also are empowered by educational efforts to help them take active involvement in class projects which have practical application, as well as helping to connect their learning experiences with their personal goals through individual educational development plans.

Understands and Embraces the Mission/ Understands the "Big Picture"

Given the above perspective of understanding, and embracing mission/understanding the big picture, educators responded to how they address this in the curricula.

- **Cooperative-learning group tasks provide an opportunity to see their role in a larger picture. This takes place in math, reading, social studies, science and physical education.**
- **Students are asked to bring the resources to bear to "make it happen", using everyone's contribution or strength.**
- **Work very hard to bring students into a concrete understanding of the mission of the school from the very beginning. Success is marked by student's awareness of it to the point where they remind you of our purpose if they feel it is not being attended to.**
- Addressed in Education for Employment classes.
- "Embrace the mission" doesn't seem to characterize the mainstream of high school kids. They understand their role, but I don't think **the majority have the maturity level to make it part of themselves.**
- Students want to know how this four years fits into **their** overall "big picture". They feel a need to justify the dollars being spent on their education.
- Discussing careers.
- Students' role in the larger picture is emphasized each year as they participate in the service component of the curriculum.

- This is an integral part of our trying to reconfigure the learning environment. The middle and high schools have on paper, very clear plans for recreating a learning environment that establishes a triage between student, parent, and faculty.
- Students are in school for two reasons: employability and citizenship. Yet, teachers and parents are reluctant to emphasize these skills. They feel a stronger calling toward more "purely academic" pursuits. They do work on skills such as this when they have the career unit, but not on a day-to-day basis.

Relating to students the applicability of understanding overall goals and their role within a "larger picture" was expressed in the following ways:

- **Each is taught that he or she has a role, and that all roles must perform at top efficiency in order for the whole process to work efficiently.**
- **Try to help them recognize that this is how the world of work functions.**
- **Cooperative learning situations and opportunities are an important part of helping them understand how their work affects others.**
- Constant reinforcement of widening their view of the impact of their work is needed.
- "My role" is worked on in small group "chapels". Here we work on relationships, issues, how your work impacts the group. (Non-public school)
- Encourage the students to have a variety of plans for their future. I tell them my own career story and show them how I am connected to others.
- To students, their work in high school is the step before college. The world of work is a very abstract concept to them.

Assessment of understanding the "big picture" is done informally as teachers observe cooperative-learning groups, individual student progress, and in one-on-one relationships and conversations with students.

Takes Ownership, Empowered

The concept of ownership and empowerment was not at first glance an obvious match to the education environment. Students can, however, take an active role in determining their own goals, investing something of themselves in the projects they become involved in, and taking personal responsibility for representing their school to the outside world. Looking at ownership and empowerment behaviors in this light, educators responded to how it is addressed in the curriculum.

- **The classroom is their "company". Its success depends on everyone.**
- **Students are empowered by participation in school activities. By their "ownership" of the organization, they have a stake in the outcome. They are taught that they share directly in the responsibility for the reputation of the school, even (perhaps especially) outside these walls. They represent the school to the community.**
- **Empowerment has to happen at the individual classroom level, where kids have a consistent, owning responsibility for creating their learning environment.**

- A very active student government and community service program.
- Speaking from a disciplinary standpoint, we stress taking responsibility for your own actions. You **choose** what to do, and I will hold you accountable for that choice.

The following remarks were shared regarding how schools go about relating to students that ownership and empowerment apply in the future:

- Relate this ownership idea especially through active service to the community. Give them an understanding that this is their world, and they need to see it as their own and learn how to make it better.
- Upon assuming responsibility, they find validation in their successes.

Observation of students' enthusiasm and cooperation are informal means of assessing this behavior.

Interpersonal Skills

As with behaviors with respect to the organization, some of the interpersonal skills (works well with co-workers and customer orientation) required some discussion to draw parallels to the education environment. This once again validated the observation that education and business do share common goals, but speak in diverse jargons.

Teamwork Skills

Cooperative learning was the most frequently mentioned means of addressing teamwork skills. The following comments were shared:

- **Try to help them know when to lead and when to follow.**
- **Try to encourage them to use all input and resources without placing a value judgment on them because of who they came from.**
- **Some type of technical education is required for all. Here we teach them to use each other as resources and work as a team.**
- **Small groups gathered for problem solving.**
- **This is addressed in technical classes.**
- **Technology education uses teamwork on a daily basis using an open problem-solving approach.**
- **Law enforcement program is the best example of teamwork. Team leaders change each week. Leaders get objectives and must lead their team to accomplish the goal.**
- **Modeling acceptance of others' input.**
- Teachers receive special training and utilize cooperative-learning groups in academic areas
  (approximately 50% of middle school teachers have received this training).
- Strongly encourage participation in extra-curriculars (60-70% participate). Teamwork is strongly addressed here.
- New program which replaces homerooms and places students of each grade together for work on developmental issues, tutoring, etc. We've seen some kids who weren't leaders in their homogeneous groups, take on leadership roles. Group mix is changed each year.
- Cooperative learning occurs most frequently in those areas of the curriculum where there has been teacher training. This type of training is encouraged, supported, but not mandated.
- This goes back to the creation of a learning community. People are not working in isolation. Competition to improve ourselves is leveraged by each of us playing a role.
- Cooperative learning combined with cross-curricular planning and learning challenges that are problem-based.

Helping students see the transfer of teamwork skills was expressed in the following ways:

- **The interviewer asked if the kids knew why they were placed in group work. The interviewer was allowed to ask this question directly of several 7th grade students: The answer received was: "It's important because it teaches us to work as a team and develop teamwork skills that are needed in the workplace, and it will teach us to get along with our co-workers".**
- **Talk to them about being connected to others with a common purpose. They are one of the "cogs of the wheel".**
- **Most of us don't think in terms of teams naturally, but if the programs present complex problems, then the need for teams is obvious and accepted.**
- **As teachers become more aware of teaming in business, they share this with the students.**

Assessment of teamwork skills is done primarily by observation. Teachers rotate students through various roles both for the student to experience the roles and for assessment purposes. Sometimes the ability to function as a team is part of the grade.

Works Well with Co-Workers

When this skill was discussed, it was sometimes necessary to draw the correlation between co-workers and students working in cooperative learning, with a common purpose or common goal. This was often addressed in conjunction with teamwork skills or with respecting diversity. Educators felt that all three skills or behaviors were interconnected. The following observations were offered as to how schools address "working well with co-workers":

- **Put students in small groups, pairs, or large groups with a common task.**
- **Emphasize students initiative in helping others.**
- **Model working well with co-workers, and respecting others.**
- **Teach students to value others' input without placing value judgements on the information due to where it came from.**
- If you translate co-workers to classmates, I think we teach this very effectively.
- The maturity level of the students is often the determining factor.
- Encourage their personal growth by teaming.
- Teach the students to be open to each other and encourage each other.

Regarding how to relate future applications of this behavior, the following comment was made:

- Reduce it to having them examine behavior. What does the behavior say? What does it look like?

Customer Orientation

Customer orientation was a bit of a "foreign term" to the education world. The interviewer presented the concept as follows. A customer is a receiver for what you produce. Can you think of instances where students must consider the audience, or receiver of their work? To whom must they answer? Who will be affected by the quality of their work? Many times, the students' ultimate customer is themselves. There are other instances such as the readership of the school newspaper being the customer of the journalism student. These analogies seemed to help most of the interviewees speak to the issue of how schools address "customer orientation". A few felt the concept was not addressed.

- **Journalism and yearbook students utilize the type of customer communication skills they would need in the workplace.**
- **Teach them to be concerned for those who "receive" their work. Perception of performance is important.**
- **Students are taught to tailor their writing to the reader, speak for a listener, to consider how what you convey is being received, and adapt appropriately.**
- **Students are taught to have a customer orientation as they are taught to represent the school in the community. They (serve as) tour guides at open houses, but even in general terms, they need to be aware of public perception of our school.**
- **Businesses should be able to assume that an incoming worker will have good interpersonal skills, and then they will teach them the specifics of their own customer orientation.**
- The English curriculum teaches students to tailor their writing and presentations to their intended audience. This is not, however, presented in terms of a client/customer relationship.
- This is emphasized in co-op positions.
- Create multiple audiences for their work.

On relating the need for customer orientation in the future, the following observation was made:

- Make them aware of tolerance and respect for all people. We directly address issues of gender, race, economic differences. To be aware of these potential areas of disharmony promotes a sensitivity to people in general.

Customer orientation is another behavior that is often assessed by informal observation. Real life tests of this occur in technical classes which deal directly with the public.

Interpersonal, Sociability

This workplace know-how skill was addressed indirectly when speaking to issues of working well with co-workers and teamwork. It also is a part of respecting diversity. Additionally, the following comments were offered:

- **Directly address office etiquette and ethics.**
- **Mediation, and teach some conflict-resolution skills, although unfortunately not systematically across the curriculum.**
- Encourage kids to be open and sensitive to each other and help where needed. Encourage risk taking, participation in clubs and events.
- Establish rules and regulations that govern interactive behavior.
- Daily focus on the whole person.
- Teachers, counselors, and administrators work with students who have difficulty with this.
- Address this with retreats and multi-age activities.
- Interpersonal skills instruction begins at a very young age. We teach them in behavioral terms. What does it look like when people get along?
- This is also incorporated into the framework of cooperative learning.

Conveying the need for interpersonal skills in future applications was not addressed by any of the interviewees. Assessment of interpersonal skills is often done informally through observation, though it is also addressed in some schools in comments on report cards. Additionally, the following comment was offered:

- Those who have been trained use functioning in teams as part of their assessment.

Respects Diversity

Nearly all the interviewees asked for a definition of "diversity". The interviewer described it as encompassing not only cultural diversity, but age, gender, and learning style. It reflects an acceptance and respect for those who are different than oneself. The following comments were offered regarding how the curricula address "respecting diversity":

- **Curriculum has been built around diversity awareness. In addition to integration throughout the curriculum, we also have a high school respect committee composed of students, parents, faculty, and administrators. Workshops and assemblies are held to create awareness of diversity. There is an annual diversity day devoted to these issues and setting goals. There are also after-school voluntary efforts to promote respect for diversity.**
- **This boils down to learning to respect others for the mere fact of their existence and not attach anything to it. If we can do that we would then be in a position to see diversity as normal and positive.**
- **Foster appreciation for diversity by presenting the contributions of many different groups of people. Hold up minority as well as majority successes.**

- **The staff emphasizes (by word and example) caring for others and accepting the other person.**
- This is part of promoting tolerance. Our instant on/instant off society does not promote tolerance.
- Though we tend to be a homogeneous community, we have had to learn religious tolerance (we have more than 17 different denominations attending our school). We do not have cultural diversity amongst the student body and I think the kids are missing something important. We do recruit minorities with scholarship programs and make the best use we can of having exchange students. The Hispanic culture is covered in the Spanish classes and diversity issues are also addressed in sociology.
- The kids experience diversity because of the makeup of the student body.
- Conflicts among students are almost always individual differences and have little to do with diversity issues.
- This comes back to our basic philosophy. This is what we are all about: respecting others, being tolerant of others. We pray each day for this in open forum. It is directly addressed in the religion curriculum when we cover social justice.
- Model respect. Set appropriate expectations.

Conveying the applicability of this behavior to future applications seemed to be implied in that it is not taught as something necessary for school, but as a life skill. Additionally, the following comments were offered:

- **All faculty have a responsibility to remind and educate students that we are part of a larger world and we need to play our part respectfully.**
- **Teach them that, in life, every one deserves basic respect. "You don't have to like everyone, but you do have to get along and give others their space."**
- Three years ago, we formed a committee on human diversity, not just on cultural diversity, but also gender, ethnic, and learning diversity. Integration of special education students helps. Caring for and respecting others is part of who we are.

The only comment made regarding assessing respect for diversity was that guidelines set up for enhancing awareness are regularly revisited. Goals are examined and revised as necessary.

Summary Questions

The summary questions were designed to allow the respondents an opportunity to show us the broad picture of their efforts, factors hindering efforts, and above all, to pass on their vision of how business and education can work together to increase the quality of our work force.

Effective Initiatives

Question: Would you share with me some initiatives that have taken place in your school(s) toward addressing "workplace know-how skills" that you feel are particularly effective?

Respondents discussed trends toward more authentic assessment, more practical hands-on application of skills, and more complex problem solving. There also seems to be movement to involve the students themselves more intimately in the charting of their own growth and development, both academically and personally. Both teachers and students are being encouraged to look at the ultimate purpose of education and tailor learning experiences to that end. Responses to this "effective initiatives" question included:

- **As the purpose of education is shifting from being educated to being employed, we are developing curriculum that involves complex thinking, creativity, and reflective critical thinking for all students.**
- **Drafting parents, who have been involved in organizational changes at work for sufficient time to see the positive results, to be members of school improvement teams and help us market needed changes to the public. This is a big help because these parents have been asked to connect to, and learn new skills in their workplaces, and it has begun to pay off before their eyes.**
- **Cooperative learning is recognized and employed as an effective way to learn the skills they will need to be successful in life.**
- **Unique opportunities for kids to be in leadership roles via heterogeneous groupings.**
- Designed academic testing to be used in conjunction with the teaching of technical skills.
- Increased emphasis on teamwork.
- Career-development plans were in place before it was legislated. Students begin to work on career development in the eighth grade.
- Building participation in school activities into the education of every student.
- The special education teacher who works with her students on study skills in regular educational settings, ends up transferring (the skills) to other students as well.
- **Make computer labs easily accessible to all.**

- May go to block scheduling to provide time for hands-on application of learning and more access to the portfolios of accomplishment. (This will require training for teachers to be truly effective.)
- More than 50% of our 11th and 12th graders are involved in Education for Employment programs.
- A curriculum design which allows students to concentrate on their basic skills in the enhancement period of the day and the drive to have teachers use more team teaching.

Barriers

Question: What barriers have you encountered in your attempts to address "workplace know-how skills"?

A prominent theme echoed over and over in each interview. There is a need for a major shift in what the public perceives teaching and learning to be. Business leaders cry for workers with good "workplace know-how skills". Educators look at national assessments and agree thoroughly. Research on learning theory has spawned some very positive solutions to the problems that plague us. These solutions, however, involve a major restructuring of how we think of education. They call for teachers as facilitators of learning. Knowledge is power, and that power needs to be given to the students in order to secure their active, enthusiastic involvement in the "learning community".

Schools attempting to implement such changes have encountered resistance from students, parents, and even teachers. We are creatures of habit. As parents, we want the best for our children. Our current vision of "best" is back to basics and "headed for college". While college may be best for some, the work force of today and the future does not hold up college as the only ticket to a successful future. Students who learn practical application of skills will not only be skilled and ready for the work force, but also much better prepared for post-secondary education.

Unfortunately, some of the same people who know as employers what it means to be a productive worker, are among those who steadfastly cling to the status quo in education, fearing change as a threat to what they perceive as an already weak system. Educators have had a history of implementing theory before they really understood it, and people fear that current proposals for restructuring are "just another fad" and yet another move "away from basics".

Education needs the involvement of business and parents in partnership to work together for positive change. Education needs, with help from business and parents, to do a better job of marketing proposals for change to the public. Public perception of "the good old days" in education has to move forward into the new global economy. We must work together to implement badly needed changes. There needs to be a recognition that in order to effect real change in learning, we have to support fundamental change in how we educate our children.

MOST FREQUENT RESPONSES:

Areas where business involvement can help eliminate barriers:

- The portfolio of accomplishments, which has been mandated to address some of the concerns of employers, is at this stage, a nice scrapbook. Until employers and colleges ask for them in their selection process, their effectiveness is weak. Once value is placed on the portfolios beyond the school, then they become an important assessment tool.
- Companies need to seek us out, not only for input regarding student performance using the portfolios, but also transcripts and attendance records. They will get a better picture of the candidate they are hiring if they seek our input.
- The process of disseminating the rationale for incorporating necessary changes is very TIME intensive. It involves public relations to the community and to all involved. Restructuring the school day and school year are needed. Resistance to such change presents a major barrier. We could use help from business to market needed changes to the public. This all equals time and money.

Areas needing further effort by education:

- A restructured school year and restructured school day with longer blocks that include application would go a long way toward solving some of these questions. Time must be provided for support and coaching of teachers to make these new things happen ... flex time, support from peers, administration and, the public. For example, physicians do not hold office hours five days/week, six hours/day. They would not be effective practitioners if they did.
- The teaching staff does not see themselves as taking ownership in the **system**. We do not model the team concept to the staff. They are isolated. Therefore, they cannot model teaming to the students.
- Hands-on application has not been valued as it should be. Sometimes kids can take calculus but cannot count back change.
- Need to re-educate the community regarding the goals and effectiveness of such techniques as cooperative learning and integrated thematic instruction.

ADDITIONAL RESPONSES:

- Encounter <u>discomfort</u> of teachers who are not skilled in modeling teamwork because they are not part of a team themselves, and of students, because being on a team often means they have to "reveal something" of themselves to others in order to offer strengths and admit needs. This is <u>very</u> difficult for those with low self-confidence or low self-esteem, yet they need teamwork most. Students may even choose to drop a class to avoid such exposure.
- Need to broaden our ideas of what kinds of post-secondary education constitute laudable and desirable goals.
- Need to train <u>all</u> teachers first, to see what <u>employability</u> means for <u>all</u> students. Need to get this away from the turf of the technical instructors and involve all educators.

- Content-area teachers tend to be so passionate about their 'subject' that they do not see a transfer of skills to the real world as part of their responsibility.
- Teachers need to see that the skills needed for state proficiency tests are the same skills the work force is asking for.
- Teachers are struggling every day with so many survival issues ... homelessness, drugs, sexuality, pregnancy, violence, lack of parental support, and whether these kids are going to get a state-endorsed diploma that they simply feel too overwhelmed to deal with yet another issue. They must deal with survival first, then content.
- It is unfortunate that efforts at additional training for teachers have often been offered at night when teachers are tired, or summers when they do not all choose to come. This is a problem that needs to be addressed.
- Money is a barrier. There isn't anything we haven't thought of. We brainstorm a lot, but there is not sufficient money to hire staff to teach some of the courses we have designed.
- Requirements for North Central Accreditation sometimes stand in the way of cooperative ventures with business. All "instructors" must be certified teachers.
- Kids come to us with such a wide range of abilities. Sometimes this dilutes the quality of the programs we are able to offer because we are stretched so thin. Minimum entrance requirements for high school ought to be in place.
- It is difficult to change in a few hours in school what is not taught at home. It is easy to support home-taught values, but difficult to overcome the lack of them.
- Maybe minimum requirements for graduation are also too low.
- Education is under managed. Education averages 14 employees per manager (just the number of teachers per administrator, does not count the caseload of 120 students that each teacher manages). The average number of employees per manager in other businesses is 6. Our organization is very large and sweeping changes are, therefore, very complex and difficult to accomplish.
- In the 1960s and 1970s when today's administrators were trained, safety was the paramount issue, even more important than learning. Now there is pressure to be accountable for learning. The safety issue has not gone away; it has gotten larger.
- In the adult world, you are what you own. For students, you are what grade you get. Your value as a person is sometimes seen through your ability to academically perform. There are a lot of fine, fine students who don't always end up at the best colleges or get the best grades. We need to validate performance, yet we sometimes lose sight of who we are because we are chasing a material thing, in this case, a grade.
- Parents can be gathered to work together to learn how to effect change, but the minority with grievances against public education in general, will filibuster the process.
- Parents who work in very traditional work settings are fearful of what they perceive to be just another fad. They want the best for their children and resist change for fear of moving away from "the basics". They want their children to be taught the way they were taught, yet they want them to be ready for the world of work of the future.

- Our country is becoming more polarized. There are fewer "haves" and more "have nots". The economic middle class is dwindling. They grew up with a scarcity mentality that there are only so many marbles. The name of the game is to get as many marbles as you can before the game is over. And so they hold on to a system which sorts and selects and awards more marbles and gives some people advantages. They fight against heterogeneous groupings and grading that looks at how well you do rather than how quickly. They feel there must be winners and losers.
- Not enough people who have children going to school today are living in the new economy. The global economy is seen as a threat rather than a promise. They need to see that the new global economy is coming, it's here, and our children need to be prepared for it.
- Parents don't want to hear about it.
- Girls don't want to take business education classes.
- Lack of transportation to technical classes in other districts.
- There's a stigma among students against technical classes.

Literacy Barriers?

Question: Considering literacy in the broad sense (including critical thinking, problem solving, as well as reading to learn and to do), describe literacy barriers which hinder your efforts?

Educators clearly articulated how the condition of literacy in our society and in individual student's environments has a profound impact upon efforts to instill "workplace know-how skills". The disparity between expectations of teachers (with a high level literacy background) and their students gives them a different set of assumptions and expectations than the student whose environment does not support literacy. Responses included:

- The impact of literacy problems transferred from one generation to the next is a very great barrier.
- Teachers do not understand literacy to be more than reading. Teachers need to be trained in what kinds of skills employers are needing and that those are the same skills needed to pass proficiency (i.e. literacy) exams. Teachers have not seen the correlation or the overlapping of the two.
- Content-area teachers do not understand the need to help students with functional literacy in their area, and certainly have not made the giant leap to the real world
- We do not perceive this to be a problem, because our kids come from literacy-minded families who send their children here at great financial sacrifice.
- We deal with kids who are on the 2nd and 3rd grade reading levels. Only some remediation is possible. We can't do it fast enough, so we lose them (they drop out).
- So many kids are in between. They don't qualify for special education, yet they leave without the literacy necessary to function in the workplace.
- Kids come from homes where they are "less inclined to read".

- The number of readers in America is low. Kids only read what they have to. There is no common view of literacy as a key to success. Reading and reflecting is a dying pastime.
- Yes. It is the nature of our society. Kids have been given a lot without having to expend a lot of energy.
- Literacy is not a part of the fabric of daily life. Often work demands little of you other than rote. Family interaction is small and mostly passive. When you do talk, it is usually not from an informed base. Being informed is not part of your behavior today. What little you read or listen to is more "pop culture" or "tabloid". Writing letters is no longer common. When future generations look back at us, they will not see our thoughts. They will see what the media translates our thoughts to be. The media communicates for us. Where is literacy fostered in that environment? When schools try to promote literacy, it doesn't fit with life experiences.
- The next generation will be involved in interactive media. It will first be accessed by the "haves". Schools need to tap this because it is occurring in the workplace. This may help us bring literacy back into our lives. We at least initially will have to interact with print. This is the school's opportunity to promote literacy. We will never go back to families loving books...but we can capture the essence.

Business and Education: How can we work together?

Question: Members of the business community have expressed interest in helping to foster "workplace know-how skills" within the schools. How have or where do you envision that they might "plug in" to the system?

Ideas for partnerships between education and business ranged from commonplace efforts, such as guest speakers and mentorships, to new innovations which have the potential for making real progress toward common goals.

MOST FREQUENT RESPONSES:

- Businesses need to ask for and use employability profiles (portfolios of accomplishment) in their interviewing and hiring processes.
- Businesses could hire teachers during the summer for some real time experience. We tend to teach what we have been taught, rather than what we have experienced. We are sometimes too academic, too ivory-towerish. We need to get out in the real world so we can bring that back to the kids.
- Cooperative and team teaching. Education could provide training for business people on how to relate to the young people.
- Business needs to help us re-educate the community as to the value of these workplace know-how skills, and the restructuring needed to effect real change in learning. Make it something you truly support, including accepting such changes for your own children.

ADDITIONAL RESPONSES:

- Need to determine what ways we can interact. What are our constraints? How can we work together to eliminate constraints?
- Need a teaching work force and teachers with regular work force experience.
- A partnership has been established with a credit union to attract business people to be mentors, presenters, advisory council members, or training sponsors.
- An idea from another district: a video was made, showing highly visible area businesses, interviewing and filming entry-level workers. Workers were asked about the need for various literacy skills at their job. It showed a diverse work force. Then lessons followed based on the skills talked about on the video. The aim was to make a connection between what they do at school and what they'll have to do at work.
- A partnership with parents of younger children, especially single mothers, and business to mentor these young mothers, to help them get the skills they need and work with the kids at the same time.
- Need an earnest partnership between business and education.
- Help purchasing equipment to help train our students for the workplace.
- Need to talk so we can match their skills and preferences with our needs.
- Mentorships, externships, internships, job shadowing.
- It is very labor intensive to make these kinds of partnerships work. Volunteers are needed to help set up arrangements for students.
- Meet with high school faculty about what the work world is looking for in workers.

Recommendations for Further Examination of Education Providers' Addressing "Workplace Know-How Skills"

This inventory has been a broad "brush stroke". The interviewees were those who could give us the best "overall picture" of secondary education's efforts to address "workplace know-how skills". It now behooves us to look closer, to hear from the teachers who must implement these skills. We need to develop an understanding of what teachers see as their mission. We need to discover the teachers' level of commitment, enthusiasm and zeal for instilling these life skills in students.

Beyond that, it would be helpful to talk to students and find out what they understand to be imperative for their future. What will be asked of me on the job? Have I learned how to learn? Do I have the basic skills needed to be successful on the job?

There are two more pieces to this complex puzzle that need to be examined. The first is to talk with those who have already completed (or have terminated) their high school careers. What did they learn that has helped them be successful in the workplace or college setting? What do they wish they had learned? If they have not been "successful" in the work world so far, how could their needs have been better met? Did they understand what the "world of work" expected when they took their first job? If not, what could the school have done to better prepare them?

Lastly, we need to talk with professionals responsible for teacher preparation, to understand their efforts to inspire a mindset that is broader than the future teacher's own subject area. How are they instilling a passion for educating the whole child, who needs to be prepared not only to pursue further education, but also to ultimately be productive in the workplace?

Conclusion

The process of listening was indeed very valuable. Just as listening to the local labor market spawned a clearer definition of needs, this inventory provided the vehicle for educators to articulate their efforts to address the needs of local employers, the barriers that hinder their progress, but perhaps most important to the Outcomes Task Force was the identification of ways that business and education can begin to dialogue toward achievement of common goals.

Education is evolving, as is our society. The purpose of education is undergoing a major shift from "being educated" to "being employed". While this emphasis does encompass more hands-on application of skills within complex real-life problems, it does not in any way diminish the preparation of the student who chooses a four-year, post-secondary education. The very same skills that create a productive worker also apply to the student who must think independently and know how to learn.

Public perception of what "teaching" and "learning" are must also evolve in order to support this evolution in education. The client of the education provider must understand and support conceptual change in how we teach our children. Knowledge is power, and this power should not be held captive by instructors, but be given to students. We must create opportunity for hands-on application and give students the skills needed for independent learning.

Business leaders can help effect much needed change by working in partnership with education to garner public understanding and support for instilling much needed life skills. Additionally, teachers, as well as students, need an opportunity to have hands-on experience in the business world. Teachers can best model teamwork and problem-solving skills to the students when they have had direct experiences in the world of work. Through dialogue, business and education can discover their common goals. They have both expressed willingness and must now begin to work together to eliminate constraints and achieve for our community, a more highly trained work force of tomorrow.

Appendix I: Interviewer Protocol Procedure for Identifying Education Interviewees

1. Phone calls were placed to superintendents to determine who would be most knowledgeable about how each school (district) addresses "workplace know-how skills". (Some of the superintendents had already forwarded their recommendations via Mr. Irv Cumming of the Kalamazoo Valley Intermediate School District, and Education for Employment Outcomes Task Force member.)

2. Phone calls were made to schedule the interview appointments. The Education for Employment Outcomes Task Force and its purpose, was introduced as needed. The survey instrument and The Workplace Know-How Skills Necessary to be Productive: Technical Report was sent out for the interviewees to peruse prior to the interview. (It was not intended that the interviewees write out their answers, but for preparation purposes, allowing the interviewees to seek out unknown information, invite persons with valuable input, etc.) Cover letters reiterated the confidentiality and generic nature of reporting the results of the interview.

3. Letters were also sent to superintendents to apprise them of our progress as interviews were scheduled.

4. The interviews were held at the education-provider sites. The interviews (with permission of interviewees) were taped, and notes taken.

5. Thank you letters were sent to all interviewees..

6. Notes from interviews were enhanced with transcription of tapes.

7. Upon completion of all interviews, the data was combined for this final report. This report summarizes the availability of learning workplace know how skills for the area, and does not focus on any individual site.

Appendix II: Survey Instrument

Code number of Institution ____

INVENTORY OF SECONDARY EDUCATION SERVICES REGARDING "WORKPLACE KNOW-HOW SKILLS" OFFERED TO ALL STUDENTS)

1. Which of the following "workplace know-how skills" are addressed by your secondary curriculum? "Note that the skills are listed in taxonomic order, which is not necessarily in order of importance." [1]

Basic Academic Skills

____ Basic reading

____ Basic verbal/speaking

____ Written

____ Listening

____ Basic math (+,-,x,/),fractions, decimals

Personal Characteristics

____ Honesty, integrity

____ Responsible, reliable

____ Lifelong learner; willingness to learn

____ Initiative; self-starter; motivation

Behaviors with respect to Organization

____ Understands and embraces mission; understands "big picture"

____ Takes ownership; empowered

Interpersonal Skills

____ Teamwork skills

____ Works well with co-workers

____ Customer orientation

____ Interpersonal; sociability

____ Respects diversity

Task Achievement Competencies

____ Attendance

____ Punctuality

____ Flexibility

____ Problem solving

____ Common sense

____ Time management

____ Consistently accurate; quality concept

(If you would like clarification of the above terms before answering, please place a question mark in the blank provided)

[1] The Workplace Know-How Skills Necessary to be Productive: Technical Report, by Kevin Hollenbeck, W.E. Upjohn Institute for Kalamazoo County Education for Employment Outcomes Task Force, May 1994.

2. Per workplace skill you have selected above, I would like to know:
   - Where in the curriculum is this skill addressed?
   - How is this related to the students as transferring to other applications (including the world of work)?
   - How do you assess this skill?

3. Would you share with me some initiatives that have taken place in your school(s) toward addressing "workplace know-how skills" that you feel are particularly effective?

4. What barriers have you encountered in your attempts to address "workplace know-how skills"?

5. Considering literacy in the broad sense (including critical thinking, problem solving, as well as reading to learn and to do), describe literacy barriers which hinder your efforts?

6. Members of the business community have expressed interest in helping to foster "workplace know-how skills" within the schools. How have or where do you envision that they might "plug in" to the system?

Appendix III:
Education For Employment
Education Assessment Workgroup

The Education for Employment Outcomes Task Force established a "Work Group" for the purpose of assessing activity in local training initiatives (secondary and post-secondary) which address non-technical work force skills.

George Erickcek, Workgroup Chair
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Kalamazoo Valley ISD

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Lawrence Schlack
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Cincy Sullivan
Youth Opportunities Unlimited
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Kelli Sweet
Coordinator of Social Studies
and Career Education
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Craig Schreuder (ex officio member)
Deputy Director-JTPA
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Appendix IV:
Education for Employment
Outcomes Task Force

1994-1995 MEMBERSHIP

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Appendix V: Study Participants

The author gratefully acknowledges those who participated in this study.

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Schoolcraft Community Schools

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Evelyn VanDeLaare
Teacher
Galesburg-Augusta High School

Don White
Principal
Hackett Catholic Central High School

Appendix VI: Glossary

The following definitions are offered as clarification of terms used by respondents.

Authentic assessment - method of evaluating student process within a real-life or simulated situation. Hands-on demonstration of skills is required.

Cluster - refers to teaching subjects as a group into a broad field of study. For example, mathematics might be integrated into a science class, or Language Arts taught as part of a cluster with a subject or content area.

Content-area teachers - instructors of **subject** areas, such as Social Studies or Science, as opposed to skill areas such as Language Arts.

Cooperative learning - group projects designed to allow students to learn teamwork, cooperation, leadership and follower roles.

Focus correction - a method of evaluation where two or three specific aspects of a work are evaluated.

Formative evaluation - assessment done during the process to help improve and increase the rate of success.

Integrated instruction - combining subject areas. For example, a unit on the Civil War might involve history, literature, art, mathematics, and the library/media center.

MEAP - standardized testing required of each school district (Michigan Educational Assessment Program).

Modeling - showing or teaching by example.

Pencil-paper-test - refers to traditional methods of testing that do not involve hands-on application of skills.

Portfolio assessment - evaluating student work based on a collection of projects. This may be finished projects only, or include a start-to-finish approach to show **how** the student works. This is called a process folio.

Rubrics - written criteria for evaluating student work.

Summative evaluation - assessment done after completion of a product or project.

Teachable moment - an unplanned, spontaneous opportunity to impart information or experience to students. It connotes a moment when students are especially open to learning.

Teacher unique - heavily dependent on the style and philosophy of the individual instructor.

Writing process - the entire step-by-step process of writing a finished product, from initial ideas, notes, rough drafts, through to the final product.

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